

CyberTran International Inc.



Kirkland, WA | Saturday, February 8, 2013



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The Automobile-Dependent Society

- Air Pollution
- Global Warming
- Traffic Congestion
- Imported Oil
- Foreign Wars



Conventional Rail as a Solution?

- ☐ Large
- ☐ Slow
- ☐ Expensive



The CyberTran Solution



- **Quantum reduction in capital cost**
- **Reduced operations cost**
- **An interconnected network**



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Developed at the Idaho National Laboratory

System Engineering Goals:

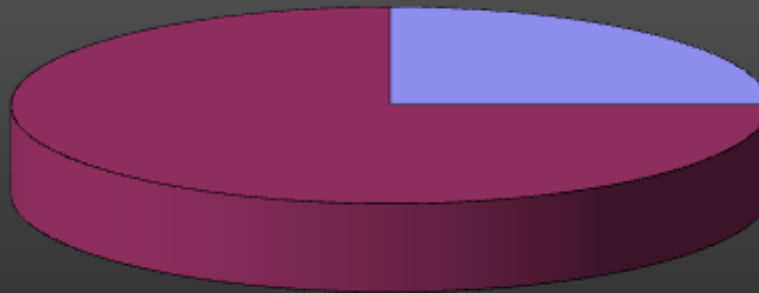
- Reduced Cost
- Improved Service
- Increased Safety



TYPICAL COST BREAKDOWN FOR PASSENGER RAIL

Vehicles, Design, Power, etc.

25 %



Route Infrastructure

75 %



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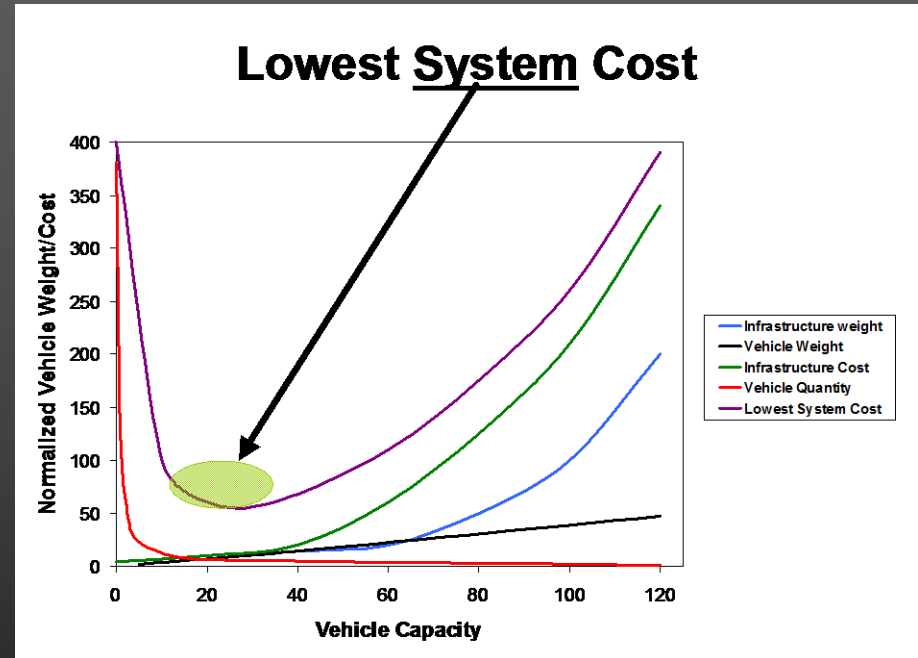
INL Engineers Analyzed Passenger Rail Systems

Key Finding:

- High capital cost of rail systems is caused by heavy vehicles

Conclusion:

- Optimum vehicle size is 6-30 passengers



Optimal Vehicle Design

- 6 to 30 Passengers per Vehicle
- Lightweight - 10,000 Pounds
- Proven Materials and Technologies
- Steel Wheel on Steel Rail
- Electrically Powered – Solar ready
- Computer Controlled



Light Vehicles Lead to Inexpensive Guideway

Easy and fast to install

Components prefabricated offsite

No ground clearing

Grade separated for safety



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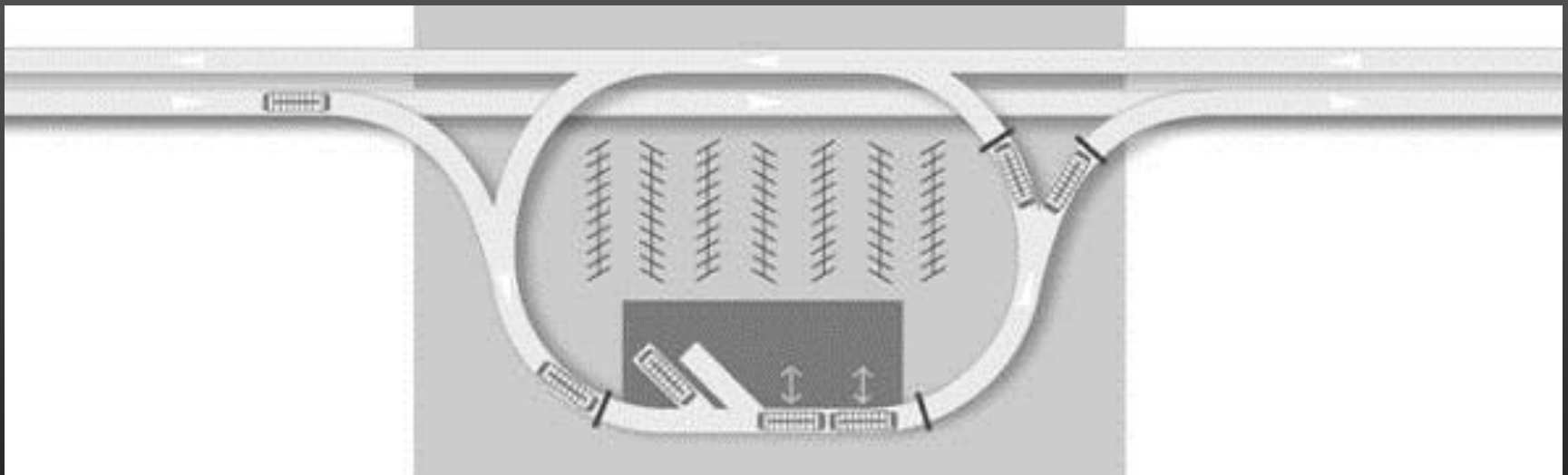
Many Light Vehicles Allow Off Line Stations

On-demand service

Increased capacity

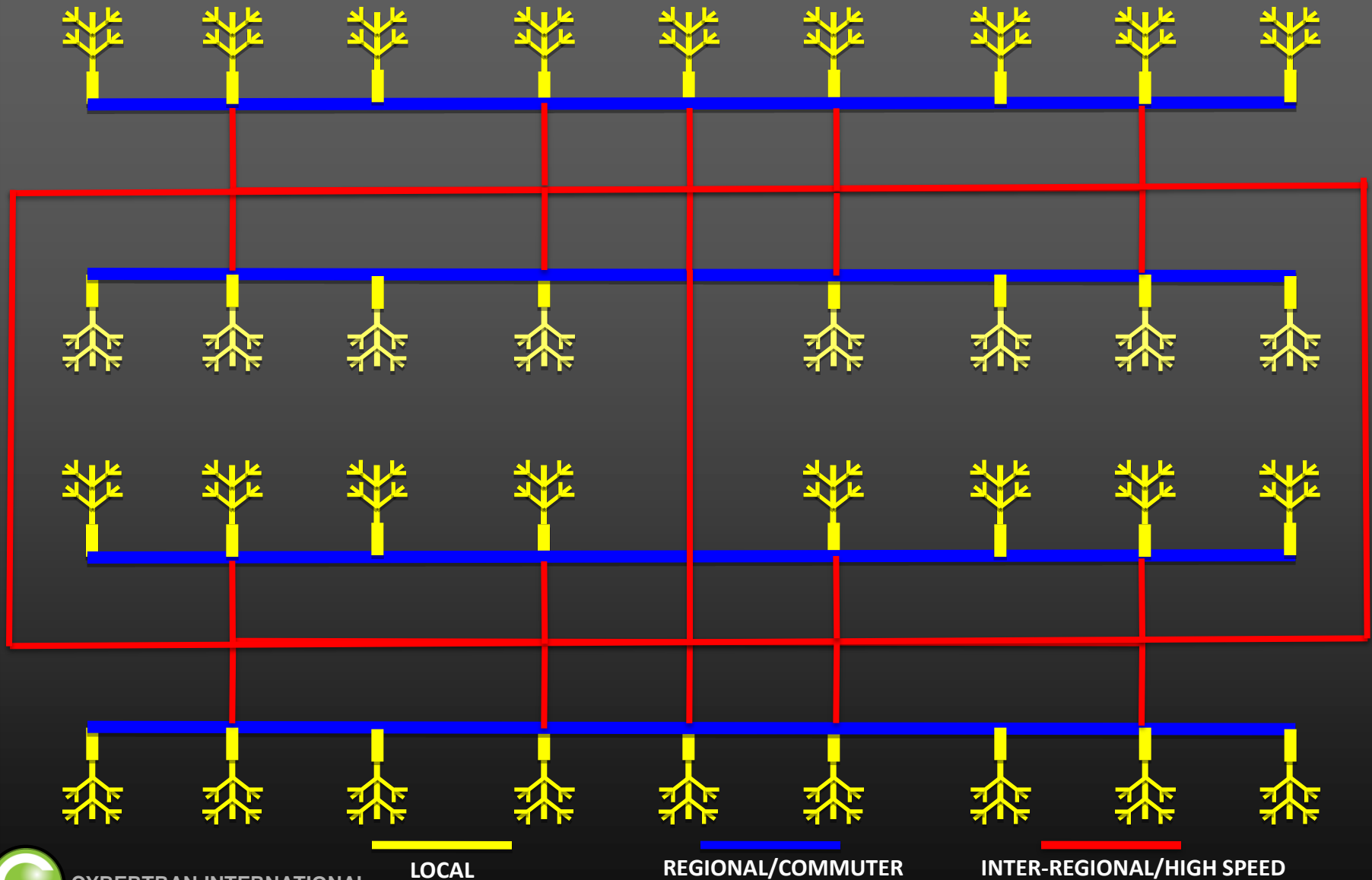
Direct-to-destination travel

Networkable lines



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The Transportation Internet is Born...



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Development Status

- **Previous Development**

- Built test vehicle and test track, 60 mph
- Built 2nd test vehicle and tested in curves
- Built test track and innovative switch and tested
- Tested multiple drivetrain configurations
- Built 10% grade track and successfully demonstrated
- Built three ¼ scale vehicles and tested



- **Previous studies and analyses:**

- Morrison-Knudsen – concluded 10-50% of cost of conventional
- Parsons-Brinkerhoff – verified guideway cost estimates
- Applied Engineering Services – verified cost estimates
- HNTB – verified seismic resilience of guideway
- BART – estimated ¼ the cost of BART, ½ the operating cost



Development Status (2)

- **Simulations**

- Vehicle simulated up to 160 mph, American Association of Railroads
- Structure simulated for earthquakes, PGH Wong Engineering
- Performance simulated at airport, Kimley-Horn

- **Current development**

- Advanced Control system
- Full Scale Integration and Test
- Solar-powered Transit Micro Grid
- Rapid ULRT Test Track
- PPP Pilot Project
- Foreign Markets



Proposed UC Berkeley-LBNL Demonstration and Test Track



Imagery Date: Oct 2, 2009

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